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BSI Standards Publication

Photography — Digital cameras — Image flare measurement

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National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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Foreword

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This document was prepared by Technical Committee ISO/TC 42, *Photography*.

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Introduction

When images are produced by a digital camera, the camera captures not only the light from the scene but also stray, unwanted light (flare) that can reduce contrast in the image. Generally, the processing applied to the image will compensate for normal amounts of flare light, resulting in improved image quality. However, flare light can be quite variable, and image processing algorithms are not always successful at removing it. Poor or excessive flare removal processing can reduce the quality of the final image. For example, subtraction of the average flare across the image could result in over-subtraction of the flare in dark areas, resulting in loss of shadow detail. In evaluating digital cameras, it is therefore useful to measure the signal from the flare light remaining in processed images. This remaining flare signal is called "image flare."

Image flare in digital cameras is caused not only by lenses but also by camera bodies and image sensors, and is affected by image processing. Measurements of image flare include all contributing factors: the optical system, camera body, image sensor, and image processing. ISO 9358 specifies methods of measuring "veiling glare," the flare from lens systems, but it is not intended to be applied for the measurement of image flare. This document specifies a method to measure image flare using the image data output by digital cameras.

A standard method is needed in part because of the nature of image flare. It can vary both locally and from image to image depending on all the factors mentioned above. While it is possible to measure image flare at different positions in different images, the variability of image flare makes it difficult to compare such measurements out of context. This document provides a standard method for measuring image flare which can be useful for cross comparison.

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